



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,853	11/26/2001	Dennis Roy Mullins	80940	4329
27975	7590	06/03/2004	EXAMINER	
ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST P.A. 1401 CITRUS CENTER 255 SOUTH ORANGE AVENUE P.O. BOX 3791 ORLANDO, FL 32802-3791			PEREZ GUTIERREZ, RAFAEL	
			ART UNIT	PAPER NUMBER
			2686	10

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/914,853

Applicant(s)

Mullins et al.

Examiner

Rafael Perez-Gutierrez

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2686

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

2. The information disclosure statement submitted on November 26, 2001 has been considered by the Examiner and made of record in the application file.

### *Drawings*

3. The drawings are objected to because of the following minor informality: The blocks identifying components or steps on **figures 1, 3, and 8** lack of proper descriptive labels. For example, **blocks 1a-1c** in **figure 1** should be labeled as --SAN-- and **block 25** in **figure 3** should be labeled --VLR--. Appropriate correction is required.
4. Applicant is **REQUIRED** to submit a proposed drawing correction or corrected drawings or arguments therefor in reply to this Office Action. If a response to the present Office Action fails to include proper drawing corrections or corrected drawings or arguments therefor, the response can be held **NON-RESPONSIVE** and/or the application could be **ABANDONED**

Art Unit: 2686

since the corrections to the drawings are no longer held in abeyance.

***Specification***

5. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Appropriate correction is required.

***Preliminary Amendment***

6. The present Office Action is based upon the original patent application filed on November 26, 2001 as modified by the preliminary amendments filed also on November 26, 2001. **Claims 1-9** are now pending in the present application.

***Claim Objections***

7. **Claims 1 and 7** are objected to because of the following informalities:
- a) On **line 5** of **claim 1**, replace “the” with --a-- after “and”; and
  - b) On **line 7** of **claim 7**, replace “the second part” with --wherein the second portion-- after “channel,”.

Appropriate correction is required.

Art Unit: 2686

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-6** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

On **line 10 of claim 1** it is recited “making signal measurements for the cells in **said list**”. The recitation of said list in **line 10** is considered indefinite because it is not clear which list is being referred to since the claim 1 appears to recited two different lists (one in **line 4** (original list) and another in **line 8** (modified list)). **Claims 2-6** are also rejected in view of their dependency in **claim 1**. Appropriate correction is required.

For purposes of applying prior art, the above-mentioned limitation is being examined as “making signal measurements for the cells in **said modified list**”.

In addition, on **line 2 of claim 5** it is recited “comparing **said measurements**”. The recitation of said measurements is considered indefinite because it is not clear which measurements are being referred to since the claim 1 appears to recited two different measurements (one in **line 5** (measurements in original list) and another in **line 10** (measurements in the original or modified list (it is unclear which list is being measured))). Therefore, the Examiner cannot determined whether the measurements being compared are those in the original list, those in the modified list, or perhaps the measurements made in the original list with the measurements of the modified list. Appropriate correction is required.

Art Unit: 2686

For purposes of applying prior art, the above-mentioned limitation is being examined as “comparing said measurements **for the cells in the modified list**”.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless -- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1 and 4-6** are rejected under 35 U.S.C. 102(b) as being anticipated by **Tayloe (U.S. Patent # 5,649,291)**.

Consider **claim 1**, Tayloe clearly shows, discloses, and claims a method of operating a subscriber unit (SU) 26 (mobile station) in a satellite cellular (mobile) telephone system 10 (figure 1 and claim 1), the method comprising the steps of:

decoding (inherent) all of a cell cluster list 54 (set of neighbouring cell data) (figure 4) transmitted in a broadcast channel to generate a cell cluster list 134 (neighbouring cell list) (abstract, figure 10, column 5 line 50 - column 6 line 6, column 7 lines 34-38, column 7 line 59 - column 8 line 7, column 11 lines 42-54, and column 14 lines 4-16);

making signal measurements for the cells 60 in said list 134 and the local cell 56 (current serving cell) (figures 4 and 10, column 9 lines 10-16 and 43-58, column 10 lines 35-40, column 11 lines 55-57, and column 14 lines 17-19);

decoding (inherent) a portion only of the set of cell cluster list 54 (set of neighbouring

Art Unit: 2686

cell data) (figure 4) transmitted in a broadcast channel and modifying the cell cluster list 134 (neighbouring cell list) (figure 10) in dependence thereon (i.e., when the SU 26 (mobile station) receives a second list with some cells having a different broadcast channel and modifies the list 134 to link those cells) (abstract, column 9 lines 20-29, column 11 line 58 - column 2 line 2, column 14 lines 20-37); and

making signal measurements for the cells in said modified list and the local cell 56 (current serving cell) (column 9 line 43 - column 10 line 18, column 12 lines 3-6, column 14 lines 41-44).

Consider **claim 4**, and **as applied to claim 1 above**, Tayloe also shows and discloses that the cell cluster list 54 (neighbouring cell data) comprises information identifying a frequency (beacon frequency) for each cell (figure 4 and column 5 line 64 - column 6 line 6).

Consider **claim 5**, and **as applied to claim 1 above**, Tayloe further discloses and claims comparing said measurements in the modified list and if the best measurement is not for the local cell 28, 56 (current serving cell), handing off (and consequently camping) on the cell 60 to which the best measurement applies (figures 4 and 10, column 10 lines 35-53, and column 12 lines 17-23).

Consider **claim 6**, and **as applied to claim 1 above**, Tayloe also shows and discloses a subscriber unit (SU) 26 (mobile station) for a satellite cellular (mobile) telephone system 10 (figure 1), the SU 26 (mobile station) comprising transceiver means (i.e., transmitter 116 and receivers 118, 120) and a controller 124 (control means), wherein the controller 124 (control means) is programmed so as to cause the SU 26 (mobile station) to operate according to **claim 1**

Art Unit: 2686

(figures 1 and 6, column 8 line 34 - column 10 line 18, and claim 11)

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.



Art Unit: 2686

11. **Claims 2 and 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tayloe (U.S. Patent # 5,649,291)** in view of **Raith (U.S. Patent # 5,404,355)**.

Consider **claims 2 and 3**, and **as applied to claim 1 above**, Tayloe clearly shows and discloses the claimed invention except the steps of decoding a further portion of said set on reception of a decode instruction in the broadcast channel and modifying the neighbouring cell list in dependence thereon (claim 2), wherein the data in said portion changes more rapidly than the data in said further portion.

In the same field of endeavor, Raith clearly show and disclose a method of transmitting broadcast information in a digital control channel (broadcast channel) including, among other steps, the steps of decoding a further portion of overhead information (e.g., neighbouring cell data) on reception of a change flag (decode instruction) in the digital control (broadcast) channel (abstract and column 9 line 61 - column 2 line 18) and modifying the overhead information previously received in dependence thereon (i.e., replacing neighbouring cell information that has changed, as indicated by the change flag (decode instruction), since the last reception of the digital control (broadcast) channel) (column 14 line 62 - column 15 line 13, column 15 line 55 - column 16 line 26, and column 18 lines 19-31), wherein data in a portion of overhead information changes more rapidly than the data in said further portion of the overhead information (column 18 lines 41-60).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Tayloe with the teachings of Raith in order to decode, as indicate by a change flag, further information received in the broadcast channel for

Art Unit: 2686

the purpose of limiting battery drain at the mobile station (Raith; column 18 lines 28-31).

12. **Claims 7 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tayloe (U.S. Patent # 5,649,291)** in view of **Ohlson et al. (U.S. Patent # 6,396,826 B1)**.

Consider **claim 7**, Tayloe clearly shows, discloses, and claims a method of operating a satellite cellular (mobile) telephone system 10 (figure 1 and claim 1), the method comprising the steps of:

transmitting a cell cluster list 54 (neighbouring cell data) (figure 4) in a broadcast channel, the cell cluster list 134 (neighbouring cell list) comprising cells served by a first satellite and cells served by a second satellite (abstract, figures 4 and 10, column 5 line 50 - column 6 line 6, column 7 lines 34-38, column 7 line 59 - column 8 line 7, column 9 lines 10-16 and 43-58, column 10 lines 35-40, column 11 lines 42-57, and column 14 lines 4-19); and

transmitting a cell cluster list 54 (neighbouring cell data) (figure 4) in the broadcast channel, wherein a portion of the list 54 has been modified (abstract, column 9 lines 20-29, column 9 line 43 - column 10 line 18, column 11 line 58 - column 12 line 6, column 14 lines 20-37 and 41-44).

However, Tayloe does not specifically disclose that the first satellite is in an orbit having a first plane and the second satellite is in an orbit having a second, different plane.

In the same field of endeavor, Ohlson et al. clearly disclose a method of operating a mobile satellite telephone system that includes transmitting neighbouring cell data that includes data related to cells served by a current service satellite (inherently located in an orbit having a

Art Unit: 2686

first plane) and data related to cells served by nearby satellites (second satellite) (which is located in an orbit having a second, different plane), wherein the data related to nearby satellites is modified according to the movement between the current satellite and the nearby satellites (column 40 lines 26-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Tayloe with the teachings of Ohlson et al. in order to provide the most current information regarding neighboring cells to the mobile station by transmitting changes in the broadcast information.

Consider **claim 8**, and **as applied to claim 7 above**, Tayloe as modified by Ohlson et al. discloses the claimed invention and, in addition, Tayloe also shows and discloses that the cell cluster list 54 (neighbouring cell data) comprises information identifying a frequency (beacon frequency) for each cell (figure 4 and column 5 line 64 - column 6 line 6).

13. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tayloe (U.S. Patent # 5,649,291)** in view of **Ohlson et al. (U.S. Patent # 6,396,826 B1)**, **as applied to claim 8 above**, and further in view of **Raith (U.S. Patent # 5,404,355)**.

Consider **claim 9**, and **as applied to claim 8 above**, Tayloe as modified by Ohlson et al. clearly show and disclose the claimed invention except the step of transmitting a decode instruction when data in the first portion of the cell data is modified.

In the same field of endeavor, Raith clearly show and disclose a method of transmitting broadcast information in a digital control channel (broadcast channel) including, among other

Art Unit: 2686

steps, the step of transmitting a change flag (decode instruction) in the digital control (broadcast) channel when a first portion of the broadcast information has been modified (abstract, column 9 line 61 - column 2 line 18, column 14 line 62 - column 15 line 13, column 15 line 55 - column 16 line 26, and column 18 lines 19-31 and 41-60).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combined teachings of Tayloe and Ohlson et al. with the teachings of Raith in order to transmit a change flag when information in the broadcast channel has changed for the purpose of limiting battery drain at the mobile station (Raith; column 18 lines 28-31).

### *Conclusion*

14. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Hutcheson et al. (U.S. Patent # 5,551,058) disclose a method and system for intelligent cell selection using location data in cellular systems;

Olds et al. (U.S. Patent # 5,574,968) disclose satellite cellular communication methods for performing cell-to-cell handoff;

Cutler, Jr. et al. (U.S. Patent # 5,678,184) disclose a method of pre-computation of candidate handoff cell list for cellular communications;

Moore (U.S. Patent # 5,995,834) discloses a method for controlling channel re-selection

Art Unit: 2686

from a selected control channel to an alternative control channel;

Grayson et al. (U.S. Patent Application Publication # 2002/0028668 A1) disclose radio signal measurement and reporting; and

Dent et al. (U.S. Patent # 6,542,716 B1) disclose position registration for cellular satellite communication systems.

15. Any response to this Office Action should be **faxed to (703) 872-9306 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Crystal Park II  
2021 Crystal Drive  
Arlington, VA 22202  
Sixth Floor (Receptionist)

16. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (703) 308-8996. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent

Art Unit: 2686

Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700 or call customer service at (703) 306-0377.



Rafael Perez-Gutierrez  
R.P.G./tpg **RAFAEL PEREZ-GUTIERREZ**  
**PATENT EXAMINER**

June 1, 2004